

### REMARKS

Claims 1-31 are currently pending in the subject application, including independent Claims 1, 12, 21, 22 and 26.

#### Section 1: Examiner's Responses to Applicants' Arguments

In section 1 of the Final Rejection, the Examiner has set forth extensive responses to contentions raised by the Applicants' representative in a paper mailed May 10, 2004 ("the previous response") in response to an Office Action issued February 9, 2004 ("the previous Office Action") in which all independent claims of the subject application were rejected as obvious over U.S. Patent Publication 2002/0037726A1 to Czaja ("Czaja" or "Czaja '726") in view of U.S. Patent 6,181,738 to Chheda ("Chheda"). The Examiner's responses to the Applicants' arguments are addressed below in roughly the order they are presented by the Examiner in section 1 of the Final Rejection. Subheadings are employed to group related issues.

#### *Narrowing Effect of Replacing Means Plus Function Language*

In regard to Claim 12, the Examiner rejects the Applicants' assertion that the replacement of the "means" language in Claim 12 is non-narrowing.

It is respectfully submitted that the question of whether an amendment is non-narrowing is only relevant to two issues: (a) whether the amendment overcame a rejection by narrowing to avoid the cited prior art, which might therefore necessitate a new search and corresponding new grounds of rejection; and (b) the issue, which would arise during litigation, of whether the claim is entitled to the scope permitted under the doctrine of equivalents. Thus, the Applicants' remarks in regard to the issue of "narrowing" are largely "for the record," because the Supreme Court, in the famous *Festo* series of cases, has placed the burden on the Applicants' representative to explain the reasons and effect of amendments.

Only in the event of case (a) - - when the Examiner believes that the amendment overcomes the previous rejection, thereby causing a new search and new grounds of rejection - - does this issue have much bearing on prosecution and allowance. Even then, the only relevance is whether a final rejection is truly warranted. Nonetheless, the Applicants' assertion regarding the narrowing effect of replacing "means plus function" language is clarified below, partly because it is respectfully contended herein that a final rejection was not warranted in the present circumstances. As such, and upon reconsideration after a new search, the Examiner could conceivably find himself in the circumstances of case (a) above.

The Examiner asserts (page 2, clause (b) of the Final Rejection) that "means for ..." language is any means. The Applicants respectfully disagree, and direct the Examiner's attention to MPEP § 2181. There, the Patent Office corrects its previous interpretation of "means plus function" language in accordance with the holding of *In re Donaldson Co.*, 16 F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994). The holding of *Donaldson* is that the Examiner cannot disregard the structure disclosed in the specification corresponding to the claimed limitations ... that such claims must be interpreted in accordance with 35 USC 112, sixth paragraph. 35 USC 112, sixth paragraph, requires that " ... such claims shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." MPEP § 2181 sets forth almost seven full pages explaining how to properly deal with such claims. The short version is this: a means plus function claim covers only the structure that is described in the specification and performs the listed function (plus equivalents to such structure). Thus, the means is not merely "any means," but is narrowly circumscribed by the actual means disclosed in the specification. A specification with extensive alternative embodiments of "means" that perform the recited function can get good breadth on such claims, and gains, as well, the advantage of "statutory equivalents." That is because 35 USC 112 sixth paragraph, invoked by "means plus function" language, explicitly provides coverage of "equivalents." Consequently, such claims need not rely on the judicial "doctrine of equivalents," which can be lost due to a narrowing amendment, according to Supreme Court rulings in the various *Festo* decisions.

In the present circumstances, the structure set forth in the specification is somewhat limited. As such, the broad generic language, even though "new" and not previously recited, is actually broader than the previous "means" language, as properly evaluated under 35 USC 112 sixth paragraph, in view of *Donaldson*. Hence, the Applicants' assertion that this amendment was non-narrowing is correct. However, this really has no bearing on the prosecution because the means plus function language has been removed, relieving the Examiner from the onerous task of determining just what is the scope of such a claim. It is respectfully submitted that the new language does not "avoid" any prior art that the original language reads upon, and, hence, that case (a) set forth above does not apply.

#### *Hard Handoffs, Soft Handoffs, Uplink and Downlink*

It is essential to understand these concepts to properly evaluate the claim terms.

A "forward link" handoff occurs when the MS stops "listening" to one BS, and starts listening to another. A soft handoff (forward link), make-before-break, occurs when an MS can listen to both BSs concurrently, before dropping one. In "true" (forward link) SHO, the MS receives the same frames from the

two BSs, roughly concurrently, and actually combines them at the signal level before decoding the data they contain. In a "selection-based" (forward link) SHO, the MS must independently decode each BS because the differences between coding rates and modulation do not permit the signals to be combined at the signal level. A hard (forward link) handoff occurs when the MS must stop listening to the first BS before it can listen to the second ... break-before-make. All of these forward link handoffs, including hard, selection-based soft, and true soft, involve changing which BS the MS listens to. In practice, an MS stops listening to a BS when that BS is removed from the MS's "active set."

These different kinds of forward link handoffs are the subject matter of Czaja '726. Accordingly, Czaja '726 discusses how the MS can receive two (or more) different-generation BS signals simultaneously, for example by dedicating one of the "fingers" of the multi-finger rake receiver to one BS, and another finger to a second BS. Which BS the MS receives information from is the forward link handoff question.

Reverse link handoff involves a change in which BSs are receiving signals transmitted from the MS. The MS must modulate the signal, code the signal (superimpose an orthogonal code of some length, such as 64 chips), and then transmit at the BS frequency. An MS transmits only one signal at a time, though it can receive two (or more) different signals concurrently. The limitation to one transmit path, together with widely different transmission parameters such as coding, modulation, frequency and/or coherency, make it impractical for two different generation BSs to receive the same signal transmitted by an MS. Czaja '726 states this tersely in paragraph 30, page 2. Due to this inability, an MS reverse link handoff is necessarily "hard," or break-before-make, because it can only transmit a signal configured for one BS generation or the other, and not for both concurrently. Issues about which BS the MS is transmitting to are reverse link issues. The subject matter of the present application identifies appropriate conditions for initiating reverse link handoffs.

The issue of forward link handoffs, addressed by Czaja '726, involves performing soft handoffs when possible, and the softer the better (i.e., "true" SHOs versus "selection-based" SHOs, see paragraph 49). No SHO discussion applies to reverse-link handoffs, which cannot be soft (see paragraph 30; and paragraphs 37 and 52, which reflect that forward link SHO is the subject of the discussion extending to paragraph 53).

*Czaja '726 In Regard to Reverse Link Handoffs*

The Examiner contends that Claims 1, 12, and 21 fail to recite "reverse link handoffs," upon which the Applicants' arguments rely. This is an artifact of English grammar, which uses the plural when denying the singular (e.g., "he has no baseballs," means he does not have even one baseball).

Czaja '726 does mention reverse link handoffs, but does not address them in the sense of providing any detail, or adding anything at all to the prior art in this regard. Czaja is the lead inventor on both the '726 published application (now U.S. Patent 6,567,666 to Czaja, et al.), and on the subject application. He filed the subject application precisely because this subject matter is not (substantively) addressed in the '726.

The Examiner disagrees that Czaja fails to address a reverse-link handoff, and points to page 4 paragraph 58 and FIG. 12. FIG. 12 shows bidirectional arrows between and MS and two BSs. Applicants do not suggest that reverse link handoffs did not exist prior to the presently claimed invention. The mention of reverse link handoffs in Czaja '726, paragraph 60, might be considered as a cryptic reflection of the admitted prior art acknowledged by the Applicants' specification, but the Applicants' specification extends farther than Czaja..

However, paragraph 59 of Czaja '726 shows that paragraph 58 (to which the Examiner points) regards forward link handoffs, because it states "The mobile station then assigns one or more demodulating fingers to the 'other-generation' base station signal ... ." As noted above, and as may be seen in Czaja '726 from paragraph 38-52, the question of which BS the MS is listening to (as well as questions of which "finger" is assigned to which BS) is an issue of forward link handoff, for transmissions from the BSs to the MS.

As noted, Czaja '726 does mention reverse link handoffs. Paragraph 30 states that reverse link SHOs are impractical. Paragraph 60 describes the reverse link handoff act, in which an MS terminates its transmission to one BS and starts it to another. (The second parenthetical in paragraph 60 is misplaced, and belongs just before the comma.)

Paragraph 60 of Czaja conveys some conditions that may be required for initiating a reverse link handoff. IG\_T\_DROP is a value for the number of frames to count before completing a selection-based SHO, while IG\_DROP\_TSHD is an Ec/Io threshold for true SHOs. The measures may be taken together to further refine the SHO mechanism (paragraph 54, page 4 of Czaja '726). It is respectfully submitted that these parameters are only indirectly relevant to reverse link handoffs. That is, as these measures were established for determining SHOs, they are relevant to forward link handoffs. However, the MS performs a reverse link

handoff when the forward link handoff (hard, selection-based soft, or true soft according to FIG. 6) is completed. Thus, in one sense the reverse link handoff occurs upon satisfaction of these condition, or as terminatino of a complete (forward and reverse links) handoff.

Czaja paragraph 60 sets forth at most a brief statement of the prior art process for determining when to initiate a reverse link handoff (and thus to complete the handoff sequence). The prior art process is set forth in more detail in the Background of the Applicants' specification, particularly on page 8 lines 3-18. The prior art process for initiating a reverse link handoff is precisely the problem that is addressed and solved by the subject application. The prior process, though satisfactory for determining which BS an MS listens to (i.e., a forward link handoff) may lead to dropped calls when applied to determine when to initiate the reverse link handoff.

The subject application is primarily directed to identifying and modifying the conditions for initiating a reverse link handoff (see, *e.g.*, Applicants' title). FIGURE 2 shows how this prior art technique can be successful, while FIGURE 3 shows how it can fail. Czaja '726 teaches less than the admitted background of the subject application, and nothing beyond such background. The subject application exists to overcome the deficiencies of the admitted prior art.

#### *Chheda '738 and Eb/No*

The fact that Chheda teaches measuring Eb/No in order to determine whether Eb/No is correct is different, substantively and qualitatively, from using the value of Eb/No to control some other decision. The Eb/No parameter, as described in Chheda, is merely the output measure of the controlled system. Transmission power is adjusted to keep the Eb/No within its predetermined range. Thus, the act is one of controlling Eb/No. It is inherent in the circular nature of feedback loops that, in order to control a parameter (*e.g.*, Eb/No), one must measure it to see if the target value has been achieved. Except for such indirect circularity, however, Eb/No is not used to control anything. Feedback control loops can be confusing, but the output measurements are generally applied only for self-control. A measurement designed for self-control does not thereby suggest that it useful for controlling something unrelated.

Chheda uses an FQM (frame quality metric) to select a desired Eb/No. For example, under some initial conditions, -9 dB Eb/No might be a sufficient signal level to ensure deliver of consistently good quality frames. Subsequent fading, or other degradation, may cause the FQM to decrease, despite Eb/No remaining at -9 dB. In that case, the target Eb/No should be raised, perhaps to -6 dB, until a point is found at which the

FQM shows that the signal level is now sufficient to reliably produce good frames. Critically, the desired Eb/No value is the quantity that is modified, in response to a remotely related parameter (namely, FQM).

Thus, Chheda does not fairly teach using Eb/No to control some remotely related parameter, such as an appropriate handoff instant for a reverse link. Chheda might arguably suggest that FQM be used to help choose which BS should receive an MS signal, which in turn is related to handoffs; but this connection, even were it less ambiguous, cannot provide grounds for rejecting the subject application, because no claim is directed to using an FQM, or any component upon which an FQM is based (primarily indications of frame data accuracy, *e.g.*, symbol or bit error rate, or CRC agreement versus data rate). The FQM is not in any way based upon Eb/No, but, rather, the target Eb/No is controlled, based upon the FQM. A contrary assertion is akin to saying the cart pushes the horse uphill.

A further issue that Eb/No is distinct from the claimed Eb/Nt is reserved for future assertion.

It is not disputed that Eb/No is "involved in" decisions. The Examiner points to FIG. 2, steps 202, 245, 250, 256, and FIG. 3 steps 305, 345 and 350, together with col. 8 lines 1-42 and col. 2 lines 35-56, col. 4 lines 1-32. In FIG. 2, the Examiner's attention is directed to the subscript "tar" at the end of each use of Eb/No. That means "target." It is the target value of Eb/No that is being changed ... thus, Eb/No is being changed on the basis of itself (step 260) or on the basis of an FQM (step 275).

An explanation of the process of determining FQM is set forth in Chheda in col. 5 lines 26-38. As described, the FQM is based on the number of symbol errors in the frame ( $S_i$ ), and on the number of CRCs ("cyclic redundancy check" values, one for each of four possible data rates) that "pass." Throughout the rest of Chheda, this process is referenced with the statement "The FQM is then determined using the above-described process." See col. 7 lines 11-12 for the reference with regard to FIG. 2 step 245, col. 8 lines 10-11 with regard to FIG 5 step 545, and col. 8 lines 57-58 with regard to FIG. 3 step 345. Thus, the FQM is never based on Eb/No. However, Eb/No is based upon the FQM, see step 360.

The cited text of col. 8 lines 1-42 describes the foregoing process with respect to FIG. 5, and FQM is not based on Eb/No, but rather Eb/No is based upon FQM, as in each of the Figs. 2, 3 and 5, and the text associated therewith.

The cited text of col. 2, lines 35-56, sets forth background, describing the admitted prior art process by which an Eb/No target is modified in accordance with a measured frame error rate (FER). This admitted prior art is similar to the teaching of Chheda, except Chheda teaches using an FQM instead of using an FER

to control an Eb/No target value. In both cases, however, the Eb/No value is the target or controlled output, not the controlling input, which is controlled on the basis of a frame quality measure (FER or FQM). The same is also true of the cited text at col. 4 lines 1-32, which is merely a summary. The target Eb/No is always the output or result of the FQM evaluation, not the other way around.

*Chheda, Alone and In Combination With Czaja*

The Examiner reasserts his previous contention that Chheda teaches a handoff between base stations based upon Eb/No. This assertion, on its terms, involves Chheda alone. The remarks above show that this contention should be withdrawn as unsupported by Chheda. In this regard, the Examiner's assertion that "one cannot show nonobviousness by attacking the references individually" is inapposite to the issue addressed. The teaching that the Examiner attributes to Chheda is simply not present in Chheda, and hence an "attack" on Chheda in this regard is the only reasonable course. An attack on Czaja, or on the combination, would be irrelevant, because the issue is what Chheda does, or doesn't, disclose.

It is, of course, absolutely true that the obviousness rejection must overcome the combination of both references, rather than merely showing that neither reference, taken alone, discloses the claimed invention. The Applicants do not urge a contrary position, and, to the contrary, fully explain the failure of both references to disclose required limitations, as well as showing the absence of motivation to combine elements of these references. However, the issue of the disclosure of Chheda requires an "attack" on that reference to correct the Examiner's unsupported assertion. While two \$50 bills are indeed equivalent to one \$100 bill, and the fact that neither alone is \$100 is quite irrelevant to such conclusion. However, what is relevant is if one of the bills, contrary to assertion, is not a \$50 bill at all, but a 50 Yen bill. In that case, the combination is not \$100, even though the "attack" is only on one of the two bills. Thus, the Examiner's citation to *In re Keller*, etc., is quite inapposite. Rather, Applicants' objection to Chheda individually is entirely appropriate, as part of the demonstration that the combination of references fails to render obvious the invention claimed in any pending, rejected claim. In the present circumstances, the combination of Chheda and Czaja cannot render obvious any of the claims, as presently amended, because Chheda simply does not have the value (or teaching) that the Examiner attributes to it. Chheda fails to teach using Eb/No as a basis for any indirectly related quantity, and instead teaches using an FQM as a basis for Eb/No.

It is acknowledged that intergenerational reverse link handoffs (IGRLHOs) were known prior to the subject application (see Background of Applicants' specification, pages 8-9). Protocols existed for determining when to perform an IGRLHO. Czaja discloses some information in this regard, but less than is

set forth in the Background of Applicants' specification. It is respectfully denied, however, that Chheda could reasonably be construed as suggesting "basing a handoff on Eb/No," *i.e.*, comparing Eb/No parameters from two different base stations as required by each rejected independent claim, let alone comparing them when one is summed with an offset. Because Czaja also fails to teach the same elements, the failure of Chheda in this regard is particularly relevant to the failure of the combination to teach such elements.

As such, Chheda when combined with Czaja fails to suggest all of the features required by any of the rejected independent claims, as presently pending.

*Motivation To Combine Chheda and Czaja*

The Examiner points to Chheda col. 4, lines 1-4 as providing motivation for the combination of these references. Chheda provides motivation for the use of an FQM in a data communication system. However, that is irrelevant to the subject application, because no pending claim is drawn to a combination of an FQM (or of any constituent or equivalent metric) with an intergenerational reverse link handoff. Thus, the text identified by the Examiner fails to motivate combining the references so as to achieve the invention as claimed, for example, in Claim 1

However, it is respectfully submitted that, though Chheda mentions Eb/No and Czaja mentions reverse link intergeneration handoffs, there is no suggestion or even reasonable possibility to combine these references so as to arrive at the recited combination. Chheda employs Eb/No in method steps. However, the method steps in which they are used are entirely related to the Eb/No value itself. There is no teaching of using Eb/No for controlling something else, such as a handoff. As such, there cannot be motivation for the particular combination of elements that the Examiner asserts is taught by the combination of references. A skilled person is simply not taught, by Chheda, to use "Eb/No" values to control anything other than itself (in a circular feedback loop). As such, Chheda does not provide a motivation to use Eb/No values from any BS as a basis for a decision to initiate a reverse link handoff. Thus, the absence of motivation is another way of saying that Chheda does not teach, or motivate, an element in the manner that the Examiner asserts.

*Neither Chheda nor Czaja Teaches Comparing One Parameter To Another Parameter Plus Offset*

The Examiner asserts that, because Czaja teaches comparing two parameters, Czaja inherently teaches comparing two parameters with an offset. As support, the Examiner creatively asserts that "when comparing between two parameters/number in order to determine whether one parameter is less than or equal to the other, an offset/different [*sic*, difference] must be calculated, and it must also be used as part of the



comparison process." The Applicants respectfully traverse the assertion, and submit that a "difference" is different than an "offset." The text of Claim 1, in this regard, recites (underlining added for emphasis): "if the first parameter is less than or equal to the sum of the second parameter and the offset." It is respectfully submitted that the "sum of the second parameter and the offset" cannot be explained as inherent in merely a simple comparison of two parameters, without completely disregarding the rules of both textual analysis and logic.

The Examiner asserts that Chheda explicitly teaches comparing parameters with an offset, pointing to col 8 lines 1-42, col 4 lines 1-32, and col 2 lines 35-56. It is respectfully submitted that the cited text does not, in fact, contain such teaching. The cited text describes operations and calculations in which an offset is added to a previous value to make a new value (*e.g.*, col. 8 line 6, "the target is then decreased by  $\Delta_2$ "). These are not comparisons. The comparisons described in the cited text are between parameters and calculated values (*e.g.*, a threshold compared to a calculated FQM). Offsets are not summed with one parameter for comparison with a second parameter.

However, it is acknowledged that such comparisons are not, in themselves, new. They are new in the context of the claim, however, for it is the simple comparison of two parameters that caused the probability of failure, as shown in conditions indicated by the Applicants' FIG. 3, which the Applicants have endeavored to solve with the ideas set forth in the subject application. An example of such comparison of one parameter to another plus an offset can no doubt be found, but it is unlikely that a skilled person would be motivated to modify Czaja to use such a calculation, instead of the prior art procedures, for determining when to initiate a reverse link handoff. Comparing parameters with one offset may be understood now to be desirable, but only because the Applicants identified a problem with the existing procedure, and saw how an offset could remedy the problem.

It is believed that the remarks set forth above address all of the issues that were raised by the Examiner in section 1 of the Final Rejection.

## **Section 2: Rejections Under 35 USC 112**

In section 2 of the Final Rejection, the Examiner rejects Claim 12 as failing to comply with the written description requirement. In particular, the Examiner asserts that the "mobile station handoff control module" is not reasonably conveyed to one skilled in the art. This grounds of rejection is respectfully traversed.

Figure 8a of the Applicants' specification is a flowchart of processing steps for the Eb/Nt handoff initiation method. Figure 8b is another such flowchart. As described between page 24, line 19 and page 26 line 7, the process involves a comparison of measuring signals from a serving BS and from a target BS, and involves initiating a reverse link handoff. The specification as a whole makes clear, and the skilled person would know, that this is the sort of process performed by a mobile station in a CDMA system.

The skilled person would know that a processing module is necessary to perform a set of processing functions. A module may be, and often is, functional in nature, and need not be located in a single physical location. The skilled person would know that hardware is necessary to perform the steps in a mobile station, and would have no difficulty configuring a mobile station to perform the steps of the described process. Indeed, the entire IS-95A and IS-2000 specifications are incorporated in the subject application by reference, and provide extensive hardware details. Hardware for calculating Eb/Nt is well known, and a "module" configured to perform the associated tasks is immediately apparent to the skilled person, particularly in view of the foregoing specifications.

A "mobile station handoff control module" is a name for apparatus that is inescapably necessary for functions such as illustrated in Figures 8a and 8b, and which would be understood to be such by the skilled person. Hardware to perform the steps of Figures 8a and 8b is implicit, and would be understood, by the skilled person, to be implied. Is there any hardware to perform such steps that could not properly be called a "mobile station handoff control module?" The name is selected precisely because it is not limiting in any particulars, and thus is necessarily an appropriate description for hardware that is unquestionably implicit. Accordingly, in view of the high level of knowledge of persons skilled in this art, of the incorporation of both IS-95 and IS-2000 specifications, and of the generality of the name, it is respectfully submitted that the Applicants' description is entirely sufficient to suggest to one of skill in the art the invention as described by the recited limitations, including the mobile station handoff control module. Therefore, the written description requirement is satisfied. As such, the Examiner is respectfully requested to withdraw this grounds of rejection.

### **Section 3: Rejections Under 35 USC 103**

In section 3 of the Final Rejection, the Examiner rejects Claims 1, 2, 4-7, 9, 11, 21 and 22 as obvious over Czaja in view of Chheda. This grounds of rejection is respectfully traversed.

To analyze Claim 1, we start with step (e), which ties together the recited parameters by "initiating a reverse link handoff between the serving and target base stations if the first parameter is less than or equal to the sum of the second parameter and an offset." Parameters that are not used for this step are therefore not described by Claim 1. In regard to this step, the Examiner asserts as follows: "see page 4, paragraph 54-61; note that when the candidate BS signal strength is greater than the threshold (i.e. signal strength of the active BS), the handoff is initiated. Since the handoff is initiated by the mobile unit from the reverse link and performs by BS; thus it is a reverse link hard handoff."

The Examiner first fails to suggest any manner in which Czaja teaches basing initiation on "first parameter is less than or equal to the sum of the second parameter and an offset." These words must not be ignored, nor may this limitation properly be simplified by the Examiner's earlier appeal to inherency, discussed hereinabove. This is a step that solves a very real problem in prior art systems, and deserves to be given proper credit toward patentability.

"Since the handoff is initiated by the mobile unit from the reverse link and performs by BS; thus it is a reverse link hard handoff" either is not correct, or at least does not apply to paragraphs 54-59 and 61, which paragraphs are directed to forward link handoffs, as is most of Czaja. The reverse link handoff is performed by the MS, not the BS, and amounts to changing which of two incompatible stations the MS tunes its transmitter to. The forward link handoff is also initiated by the MS. Paragraph 60 indicates that, upon completing the requirements for the forward link handoff, the reverse link handoff is performed.

Czaja does not set forth unique criteria for initiating the reverse link handoff (RLHO), but rather merely performs the RLHO when the FLHO requirements are completed. Czaja suggests nothing more specific than satisfaction of IG\_T\_DROP and/or IG\_DROP\_TSHD. The IG\_DROP\_TSHD is an  $E_c/I_o$  threshold, not an  $E_b/N_t$  threshold as required by clauses (a) and (b); nor is there any suggestion of an offset.

Thus, Czaja fails to teach initiating an RLHO based on comparing one  $E_b/N_t$  parameter with another  $E_b/N_t$  parameter plus an offset, as required by clause (e) in conjunction with clauses (a) and (b). As has been noted above, Chheda fails to remedy the failure of Czaja to teach  $E_b/N_t$  for this purpose, because  $E_b/N_t$  is a controlled quantity, not a control quantity in Chheda. Neither reference teaches basing the RLHO on such parameters with one summed with an offset, as required by clause (e). The Examiner does not cite U.S. Patent 5,872,774 to Wheatley et al. ("Wheatley") for these features, and indeed Wheatley also does not remedy the failures of Chheda and Czaja.

Each of these failures individually precludes the combination of Czaja and Chheda from rendering Claim 1 obvious. The absence of these required limitations in both of the cited references precludes these references from supporting a *prima facie* case of obviousness. Consequently, Claim 1 as currently pending is nonobvious, and properly allowable, over the combination of Chheda and Czaja (and Wheatley).

Independent Claim 12, clause (b), contains limitations very similar to those of Claim 1, set forth above, that Chheda and Czaja both fail to disclose. Independent Claim 21, clause (d) (in conjunction with clauses (a) and (b) requiring Eb/Nt), also has similar limitations. Independent Claim 22, clause (b), also contains substantially similar limitations. The reasoning set forth above with respect to Claim 1 applies substantially identically to Claims 12, 21 and 22 to prevent the combination of Chheda and Czaja from supporting a *prima facie* case of obviousness for any of these claims. Claims 26-31 stand allowed, and all other claims are allowable at least by virtue of depending upon one of the independent Claims 1, 12, 21 or 22. As such, each and every claim pending in the subject application either stands allowed, or has been shown to be nonobvious and properly allowable.

*A New Point: Chheda Cannot Be Combined With Czaja To Derive IGRL Handoff Method*

A further point about Chheda, with respect to intergenerational reverse link (IGRL) handoffs is brought to the Examiner's attention. If Chheda provides a suggestion in regard to aiding in a handoff procedure, it is in col. 5 lines 15-20, the text of which is set forth below (underlining added for emphasis):

The Frame Quality Metrics are used in CDMA systems during a soft hand-off between two base stations. Since the base station controller is receiving the same frame from two different base stations, the Frame Quality Metric is used to determine which frame to use: the frame with the highest Frame Quality Metric.

A further problem with this suggestion exists, beyond the previously noted problem that the FQM does not depend upon an Eb/No value, which precludes combining Chheda with IGRL handoffs in Czaja. The further problem is that in IGRL handoffs (IGRLHOs), the two different-generation BSs cannot concurrently receive the same signal transmitted by the single transmit path of a particular MS, due to required differences in coding, frequency, modulation, and coherency ( see Czaja paragraph 30). Therefore, using an FQM as a basis for selecting between BS receivers for an MS, as suggested by Chheda (see above), simply does not work for IGRL handoffs. The comparison of FQMs from different BSs, suggested by Chheda, is a soft handoff in which both BSs concurrently receive the same signal until one BS is dropped. Soft handoffs (SHOs) are impractical for IGRLHOs, and for the same reason an FQM comparison cannot be

VIA-015-PAP  
Application No. 09/687,199

Reply Date: October 5, 2004  
Reply to Final Rejection Office Action of July 23, 2004

used with IGR LHOs. The problem that makes IGR LHOs unique, and precludes IGR LHOs, is that two (different generation) BSs cannot receive the same frame from an MS; yet, the FQM comparison requires such concurrent reception by both BSs.

Thus, even if FQM was based upon Eb/No (not to mention Eb/Nt), which it is not, the method taught by Chheda cannot be used for IGR LHOs. A nonworking solution is not motivated, see MPEP 2141.01 subheading "The Proposed Modification Cannot Render the Prior Art Unsatisfactory for its Intended Purpose," and MPEP 2141.02, "Reasonable Expectation of Success Is Required." Modification of Czaja by Chheda, as proposed by the Examiner, fails for the intended IGR LHO purpose, precluding a finding of motivation to combine. Because motivation to combine is an essential element of a *prima facie* case of obviousness, this failure constitutes an independent third reason that prevents the combination of Chheda and Czaja (and Wheatley) from rendering obvious any of the independent claims that presently stand rejected.

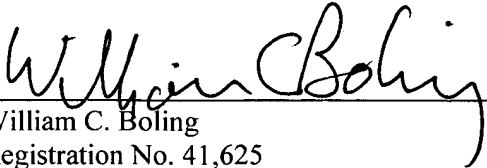
#### Conclusion

In view of the foregoing remarks, it is respectfully submitted that each claim, as presently pending in the subject application, is in condition for immediate allowance. As such, the Examiner is respectfully requested to withdraw each of his grounds for rejection, and to promptly issue a Notice of Allowance in respect of all pending claims. Should the Examiner find new grounds for rejecting any pending claims, a further non-final Office Action setting forth such new grounds is respectfully requested.

The Commissioner is authorized to construe this paper as including a petition to extend the period for response by the number of months necessary to make this paper timely filed. Fees or deficiencies required to cause the response to be complete and timely filed may be charged, and any overpayments should be credited, to our Deposit Account No. 50-0490.

Respectfully submitted,

10/5/2004  
Date: October 5, 2004

  
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